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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO. |
|--|-------------|----------------------|----------------------------|------------------|
| 10/550,133   | 10/26/2005  | Gerrit H. Verwoerd   | VERWOERD 1 PCT             | 1283             |
| 25889  | 7590        | 09/15/2008           |                            |                  |
| COLLARD & ROE, P.C.<br>1077 NORTHERN BOULEVARD<br>ROSLYN, NY 11576 |             |                      | EXAMINER<br>LEE, GILBERT Y |                  |
|  |             |                      | ART UNIT                   | PAPER NUMBER     |
|  |             |                      | 3673                       |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/550,133 | <b>Applicant(s)</b><br>VERWOERD, GERRIT H. |  |
|                              | <b>Examiner</b><br>GILBERT Y. LEE    | <b>Art Unit</b><br>3673                    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 8-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. The amendment filed 6/23/08 has been entered.

### ***Claim Objections***

2. Claim 8 is objected to because of the following informalities: --a-- should be added before "peripheral" in line 9. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosch (FR Patent No. 1,391,410) in view of Reid (US Patent No. 2,859,061) and Benware (US Patent No. 3,642,248).

Regarding claim 8, the Bosch reference, as best understood discloses a combination valve (Page 2, Lines 70-83), piston (2), cylinder (1) and annular gap seal (Fig. 4), said annular gap seal blocking a flow of fluid from a high-pressure side to a low-pressure side of the valve in a blocked position (Page 2, Lines 70-83), the valve having the cylinder which the fluid may flow through and in which the piston is axially displaceable (Fig. 4), and an annular gap (e.g. gap between 1 and 2) between the

piston and the cylinder (Fig. 4) being sealable in the blocked position using the annular gap seal (Fig. 4), which lies in a peripheral groove (Fig. 4), two sealing rings (23 and 24) positioned mirror-symmetrically (Fig. 4) and a sealing surface (A) of a first sealing ring (Fig. 4),

a sealing shoulder (B) of the first sealing ring (Fig. 4), and a sealing lip (C). Note that the seal of the Bosch reference is **capable of** blocking flow of a fluid (Page 2, Lines 70-83).

However, the Bosch reference fails to explicitly disclose the groove being in the cylinder, as well as, a peripheral lug on both sides, projecting into the groove.

The Reid reference, a seal used with a piston, discloses making the groove in the piston or the cylinder (Figs. 17 and 22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to place the groove in the cylinder instead of the piston in the Bosch reference in view of the teachings of the Reid reference as a matter of mechanical expedience and to reduce manufacturing costs.

The Benware reference, a sealing mechanism, discloses providing peripheral lugs (e.g. 106 and 108) that project toward a middle plane of the groove (Fig. 2) to the groove.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide peripheral lugs to the Bosch reference in view of the teachings of the Benware reference in order to lock the seal in the groove (Abstract).

Regarding claim 9, the Bosch reference, as modified in claim 8, discloses the sealing rings having a C-profile (Fig. 4).

Regarding claim 10, the Bosch reference, as modified in claim 8, discloses the annular gap seal (Fig. 4). Note that the annular seal of the Bosch reference is **capable of** being pretensioned.

Regarding claim 11, the Bosch reference, as modified in claim 8, discloses a stabilizing element (17) which may be laid in the direction of the groove with the sealing rings (Fig. 4).

Regarding claim 12, the Bosch reference, as modified in claim 8, discloses the stabilizing element being a coiled spring (Fig. 4). Note that the spring of the Bosch reference is **capable of** being inserted in a torus shape.

Regarding claim 13, the Bosch reference, as modified in claim 11, discloses the annular gap seal (Fig. 4). Note that the annular seal of the Bosch reference is **capable of** being pre-tensioned using the stabilizing element.

### ***Response to Arguments***

4. Applicant's arguments filed 6/23/08 have been fully considered but they are not persuasive.

With regards to the applicant's argument of the Reid reference not being relevant, the argument is not persuasive because Fig. 17 clearly shows the seal being in a peripheral groove of a piston member while Fig. 22 shows the seal being in a peripheral groove of a housing member.

With regards to the applicant's argument of the Benware reference, the argument is not persuasive because the Benware reference is only being used to teach the concept of adding lugs to the groove in order to lock a seal into the groove. The seal of the Benware reference is not replacing the seal of the Bosch reference.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GILBERT Y. LEE whose telephone number is (571)272-5894. The examiner can normally be reached on 8:00 - 4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia L. Engle can be reached on (571)272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patricia L Engle/  
Supervisory Patent Examiner, Art Unit 3673

/G. Y. L./  
Examiner, Art Unit 3673